

Intelligent Weighing Technology, Inc.

ZS Series

ELECTRONIC WEIGHING SCALE

OPERATION MANUAL



A Higher Level of Precision...

A higher Level of Performance™

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INSTALLATION

1. Check and make sure that the following accessories are included:

Operation Manual X 1

ZS Scale X 1

Stainless Steel Platter X 1

Power Adaptor X 1

Contact your dealer if any item is missing.

2. Install stainless steel platter.

3. Power up the scale:

Insert one 9V battery (not supplied) into the battery compartment or apply the external power adaptor. The power adaptor jack is inside the battery compartment. Before plugging the power adaptor into the electricity outlet, check and make sure the input voltage of the power adaptor matches with the output voltage of the outlet.

If they do not match, please do not plug in the adaptor and contact your dealer for a replacement.

** When the power adaptor is being used, please remove all the batteries from the battery compartment. Failure to do so might cause a battery leak/explosion or damage to the scale. **Do not use any rechargeable battery.** This scale does not recharge any batteries.

SPECIFICATIONS

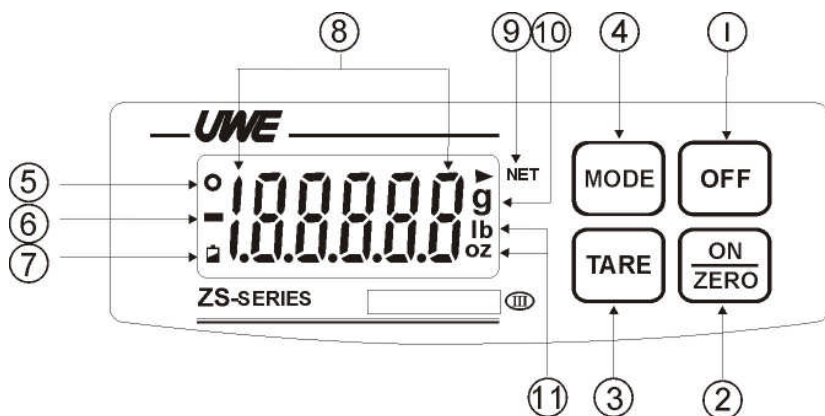
Model	Capacity	Division
ZS-600	600g/1lb 5.195oz	0.1g/0.005oz
ZS-3000	3000g/6lb 9.98oz	0.5g/0.02oz
ZS-6000	6000g/13.4lb.00oz	1g/0.05oz
Power Source	9V battery or External Power Adaptor	
Max. Zero Range	2% of Rated capacity	
Max. Tare Range	100% of Rated capacity (Subtractive)	
Weight Units (Note A)	Metric (g), Avoirdupois (lb & oz) & Taiwanese (tg)	
Operation Environment	0°~40°C (32°~104°F), Non-condensed. R.H. ≤ 85%	

Specifications subject to change without notice

NOTE A:

To comply with the law of certain countries, Avoirdupois and Taiwanese weight units may be disabled. Contact your dealer for more information.

KEYBOARD LAYOUT & FUNCTIONS



① OFF KEY

Press this key to turn scale off.

② ON/ZERO KEY

Press this key to turn scale on or set weight to zero.

③ TARE KEY

Press this key to tare off the weight of a container.

④ MODE KEY

Press this key to switch between weight units.

KEYBOARD LAYOUT & FUNCTIONS

⑤ ZERO INDICATOR

This indicator appears to indicate zero weight status.

⑥ MINUS INDICATOR

This indicator appears to indicate negative weight values.

⑦ LO-BAT INDICATOR

When this indicator appears, change the battery.

⑧ WEIGHT INDICATOR

Displays the weight of the item placed on the scale.

⑨ NET INDICATOR

This indicator appears to indicate the tare function is in operation and weight shown is net weight.

⑩ METRIC INDICATOR

This indicator appears to indicate the metric weight unit is in use.

⑪ AVOIRDUPOIS UNITS INDICATOR

This indicator appears to indicate the avoirdupois weight unit is in use.

INTERNAL FUNCTIONS

The scale is equipped with 13 internal functions, which are:

FUNCTION NUMBER	<u>FUNCTION DESCRIPTION</u>
Fun 0	For Qualified Technical Personnel Only
Fun 1	For Qualified Technical Personnel Only
Fun 2	Check Display Segment
Fun 3	Select Auxiliary Weight Units and offset value
Fun 4	Select Auto Power Off
**Fun 5	Select Rs-232 Baud Rate & Protocol
Fun 6	Select Digital Motion Filtering Function
**Fun 7	Select Serial Output Mode
**Fun 8	Select UTP Printout Format (<i>This function is UTP related</i>)
Fun 9	Select Auto Tare Function
**Fun 12	Select Number Of Printout Copy (<i>This function is UTP related</i>)
**Fun 15	Set and Send Date & Time Data to UTP (<i>This function is UTP related</i>)
Fun 19	For Qualified Technical Personnel Only

**** Only installed with RS232 option.**

INTERNAL FUNCTIONS

Do not alter any parameters set in Fun 0, 1 & 19, which may cause system instability, error, or non accurate weighing result. If entered by mistake, press **OFF** immediately. Contact your dealer for more information.

INITIAL SETUP

How to select internal functions

- a. Turn scale off
- b. Press and hold **TARE**, then press **ON/ZERO**
- c. Scale displays **Fun-0**
- d. Press **TARE** until scale displays the desired internal function number
- e. Press **MODE** to enter and trigger various setting values.
- f. Press **TARE** to select
- g. Scale displays the next internal function
- h. Repeat **d** & **e** for next desired setting, or
- i. Press **TARE** to save and restart scale, or
- j. Press **OFF** to save without restarting
- k. Press **ON** to restart scale

Display Segment Check

Under this function, backlight (if equipped) functional indicators and display segments will be lit up. Contact your dealer if any display element is missing.

Select Auxiliary Weight Units

2 auxiliary weight units in addition to metric are available. These are Avoirdupois and Taiwanese Units.

Under this function, scale displays capacity and division followed by the selected weight unit on Weight Panel.

INITIAL SETUP

The example below **600.1** is the capacity and division of ZS-600 (600g x 0.1g), which is used for illustration.

600.1 **g** (metric only)

600.1 **g lb/oz** (metric and Avoirdupois weight unit enable)

6.0.0.1 **g lb/oz** (metric, Avoirdupois and Taiwanese weight units all enable)

Select Auto Power Off Function

5 parameters are available: -

0oFF (Auto Power Off Function disabled)

4oFF (Auto off when left idle for 4 min)

10oFF (Auto off when left idle for 10 min)

20oFF (Auto off when left idle for 20 min)

30oFF (Auto off when left idle for 30 min)

** Under the Auto Power Off function mode, the scale will turn off automatically when it is left idle for the selected time.

INITIAL SETUP

Select Digital Motion Filtering Function

3 parameters are available:

Filt.0 (filtering function disable)

Filt.1 (filter 1)

Filt.2 (filter 2)

Use digital motion filtering function when the operating environment is subject to disturbances like vibration, wind flow, etc. Select higher filter values for worse environments. Filt2 gives the slowest response compared with other 2 parameters.

Select Auto Tare Function

2 parameters are available:

Tr-On (Auto Tare Function enable)

Tr-OFF (Auto Tare Function disable)

Under the Auto Tare Function, the first load applied to scale will be treated as a container and will be tared off automatically.

INSTRUCTION FOR USE

Before Weighing

Make sure that

- 1- The scale is placed on a level and stable surface.
- 2- The stainless steel platter is placed correctly on top of load receptor.
- 3- The scale is turned on.
- 4- The **ZERO INDICATOR** is on. If not, press **ON/ZERO** to set display to zero.

Weighing

- 1- Always place an object onto the platter gently. Excessive force applied to platter may cause damage to the sensor inside the scale.
- 2- The weight of the object will be displayed automatically.
- 3- It is a good practice to remove all loads from platter after weighing. It will prolong the life of the scale.

INSTRUCTION FOR USE

Selecting Weight Unit

Press **MODE** to shift among various weight units (gram, lb/oz and Taiwanese) with or without backlight if required. Refer to page 8 for internal setting procedures. (For backlight, just keep pressing the mode until the display is backlit)

The weight unit used before power off will be employed when the scale is turned on again.

Set Display Value to Zero when Unloaded

Press **ON/ZERO** to set weight displayed to zero when unloaded. Refer to **SPECIFICATIONS** for maximum zero range.

Tare off the Weight of a Container

When a container is used, follow the steps below to tare off the weight of it and to obtain a net weight result.

- a. Remove all loads away from platter
- b. Make sure that zero weight and the **ZERO INDICATOR** appear. If not, press **ON/ZERO** to set it to zero weight.
- c. Place the container on the platter.
- d. Press **TARE**.

INSTRUCTION FOR USE

After **TARE** is pressed, the **NET INDICATOR** and then a zero weight value are displayed. In this case, the **ZERO INDICATOR** will not appear even though a zero weight is displayed.

Refer to page 11 for weighing procedures. Weight displayed is the net weight of the subject matter. Refer to **SPECIFICATIONS** for maximum tare range.

Clear the Tare Function

- a. Remove all loads from platter.
- b. The scale will display a negative value, which is the weight of the container, and the **ZERO INDICATOR** appears.
- c. Press **TARE**.
- d. After **TARE** is pressed, a zero weight will be displayed while the **ZERO INDICATOR** remains.

INSTRUCTION FOR USE

Lo-Bat Indicator

When the **LO-BAT INDICATOR** appears, it means that the battery power is low. Replace the battery with a new one, or apply the external power adaptor immediately. The power adaptor jack is inside the battery compartment.

Caution

When the power adaptor is being used, remove all batteries from the battery pack. Failure to do so may cause battery leak/ explosion or damages to the scale.

ERROR CODES / TROUBLESHOOTING

Error Codes

Error Code	Description
Nostbl	Calibration weight is not stable
Err_1	IC U2(93C46) failure
Err_2	Offset Value too low
Err_3	Offset Value too high

Troubleshooting

Syndrome	Scale cannot be turned on
Check:	Is the scale power supply or battery power too low?
Action:	Replace the battery with a new one or apply the power adaptor.
Check:	Is the power adaptor inserted properly into both the electricity outlet and the DC inlet of scale.
Action:	Secure both ends of the power adaptor and try again.
Syndrome	Scale displays “Err”
Check:	Is the load applied exceeding the rated capacity of scale?
Action:	Remove all loads from platter and try again.

ERROR CODES / TROUBLESHOOTING

Syndrome Scale turned off automatically
Is the **AUTO POWER OFF FUNCTION** being employed?
Refer to page 9 in the **Select Auto Power Off Function** to disable the Auto Power Off Function.

Check: Is the **LO-BAT INDICATOR** on?

Action: Replace the battery with a new one, or apply the power adaptor immediately.

Syndrome Weighing result is not accurate

Check: Is the scale placed in a level condition?

Action: Relocate the scale to obtain a level condition.

Check: Is the scale affected by airflow, vibration or RFI?

Action: Place the scale away from all disturbances.

Check: Is the scale calibrated correctly?

Action: Contact your dealer.

Check: Is the correct weight unit employed?

Action: Refer to page 12 to select the correct weight unit.

DAILY CARE & MAINTENANCE

- 1- Clean the scale with a soft and damp cloth. If necessary, apply a mild detergent. Do not allow water anywhere near the scale.
- 2- Do not use any harsh, abrasive material, acetone, volatile solvent, thinner or alcohol for cleaning.
- 3- Verify the accuracy of scale periodically. Re-calibrate the scale if necessary.
- 4- Remove weights from the platter when not in use.
- 5- Remove the battery when the scale will not be used for an extended period.

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Intelligent Weighing Technology has more than 50 years combined experience in the weighing industry, both in the USA and worldwide. With contacts in over 50 countries including the USA, we provide you with the weighing equipment you need. When you invest in weighing equipment from Intelligent Weighing Technology, you're really buying peace of mind.

Quality - Scales and balances solidly built from the ground up with superior engineering and components for exacting results.

Value - From bench scales to analytical balances, weighing equipment priced for real-world business applications, with superior service and support.

Experience - Expert advice to help you choose just the right product for your application.

Quality + Value + Experience...it adds up to the Intelligent Investment.

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